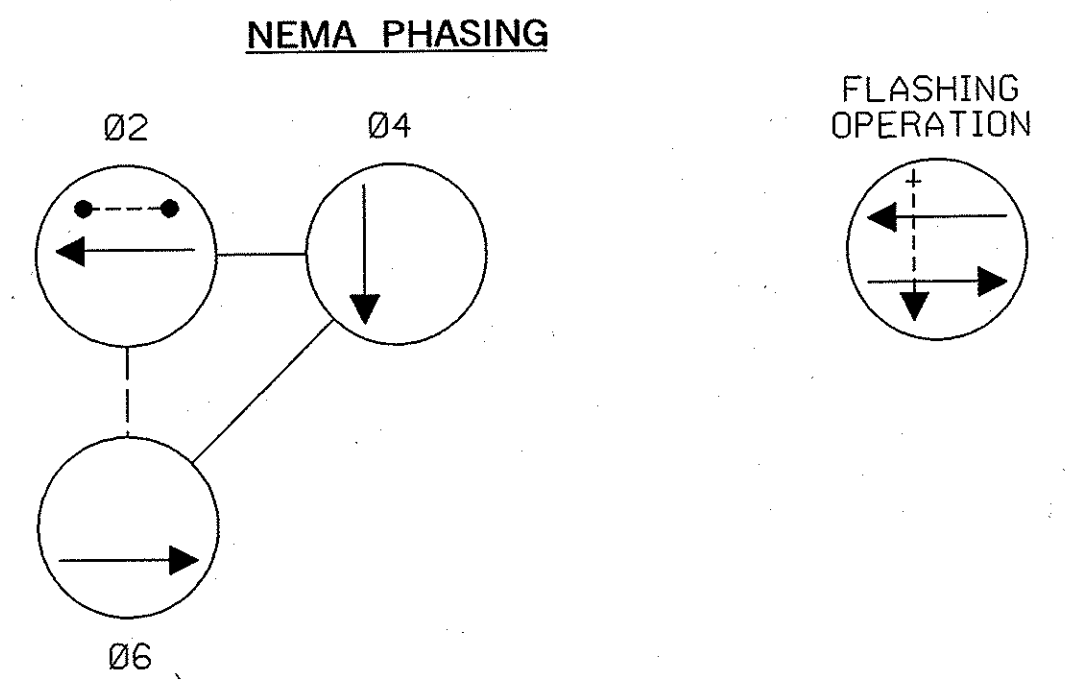
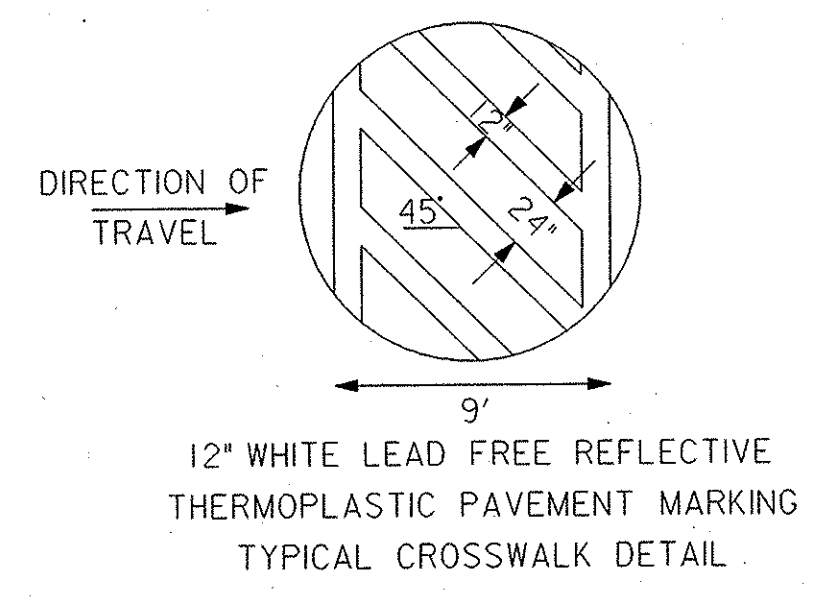


- CONSTRUCTION DETAILS**
- A. INSTALL NEMA SIZE "6" BASE MOUNTED CABINET AND CONTROLLER, WITH ALL NECESSARY EQUIPMENT (NOTE: 2-2 IN. AND 2-4 IN. 90 DEGREE BENDS)
  - B. INSTALL 27 FT. STEEL POLE WITH 50 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERA AND 20 FT. LIGHTING ARM WITH 250 WATT HPS LUMINAIRE. (NOTE: 1-3 IN. PVC 90 DEGREE BEND)
  - C. INSTALL 27 FT. STEEL POLE WITH TWIN 70/50 FT. MAST ARMS (CUT 50 FT. MAST ARM TO 38 FT.), FOUNDATION, LED TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERAS AND 20 FT. LIGHTING ARM WITH 250 WATT HPS LUMINAIRE. (NOTE: 1-3 IN. PVC 90 DEGREE BEND)
  - D. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE WITH LED TRAFFIC SIGNAL HEAD, SIGN AND FOUNDATION. (NOTE: 1-3 IN. PVC 90 DEGREE BEND)
  - E. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, FOUNDATION, ACCESSIBLE PEDESTRIAN PUSHBUTTON AND R10-4(1) SIGN TO READ "PUSH BUTTON TO CROSS I-495 RAMP". (NOTE: 1-3 IN. PVC 90 DEGREE BEND)
  - F. INSTALL ELECTRICAL HANDHOLE
  - G. INSTALL 200 A. METERED SERVICE PEDESTAL (NOTE: 2-2 IN. PVC 90 DEGREE BENDS)
  - H. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED)
  - J. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) FOR UNDERGROUND POWER SERVICE. CAP AND MARK CONDUIT AT UTILITY POLE FOR USE BY OTHERS.
  - K. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED)
  - L. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (SLOTTED)
  - M. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) FOR PROPOSED TELEPHONE SERVICE (SLOT PORTION OF CONDUIT CROSSING THE EXISTING RAMP). CAP AND MARK CONDUIT AT UTILITY POLE FOR USE BY OTHERS.
  - N. INSTALL GROUND MOUNTED SIGN (NO. 14) ON TWO 4 IN. X 6 IN. WOOD POSTS
  - O. INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (SLOTTED)
  - P. INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
  - Q. INSTALL A 6 FT. X 30 FT. LOOP DETECTOR ENCASED IN 1/4 IN. FLEXIBLE TUBING, QUADRUPEL TYPE (3-6-3 TURNS)
  - R. INSTALL 12 IN. HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK (SEE DETAIL THIS SHEET)
  - S. INSTALL 24 IN. HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE
  - T. INSTALL GROUND MOUNTED SIGN AND ASSOCIATED FLAGS (NOS. 22-26) ON ONE 4 IN. X 6 IN. WOOD POST. SHA DISTRICT FORCES WILL REMOVE SIGNS THREE MONTHS AFTER INSTALLATION.
  - U. INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT (SLOTTED)

**UTILITY LEGEND**

—E—E—	ELECTRIC CABLES	—SD—SD—	STORM DRAIN
—A—A—	AERIAL CABLES	—G—G—	GAS MAIN
—T—T—	TELEPHONE CABLES	—W—W—	WATER MAIN
—F—F—	FIBER-OPTIC	—S—S—	SEWER MAIN

- GENERAL NOTES**
- THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
  - MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING MDSHA STANDARD PLATES FOR TRAFFIC CONTROL.
  - MONTGOMERY COUNTY WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING.
  - VIDEO CAMERA LOCATION/ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
  - SEE GENERAL INFORMATION SHEET FOR CABINET, SIGNAL POLE AND APS ASSOCIATED SIGNAL HEADS, VIDEO DETECTION CAMERA, SIGN AND MARKING LAYOUTS.
  - WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
  - ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MDSHA STANDARDS.
  - SEE SHEETS SP-03 TO SP-04 FOR INTERCONNECT PLANS.
  - THE CONTRACTOR SHALL VERIFY THE PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
  - ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, AND MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
  - ALL ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO MONTGOMERY COUNTY FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. KEITH LORD TO COORDINATE AT 301-279-1971.
  - THE CONTRACTOR SHALL CENTER THE PROPOSED CROSSWALKS ON NEWLY CONSTRUCTED RAMPS.
  - LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCO SEC. 4E-09 AND FIG. 4E-2; AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
  - ALL TRENCHED AND SLOTTED CONDUIT UNDER THE EXISTING AND PROPOSED ROADWAY SHALL BE INSTALLED PRIOR TO PAVING.



NOTE: PHASES ASSOCIATED BY A DASHED LINE MAY/WILL OPERATE CONCURRENTLY. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

**STV Incorporated**  
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APPROVALS	REVISIONS
<i>Jeffrey A. Norkel</i> 10/10/06 LEADER	
<i>Mickey Ruck</i> 10-10-06 ASST. DIR. CHIEF	
<i>Wanda Hand</i> 10/10/06 DISTRICT ENGINEER	
<i>[Signature]</i> 10/17/06 OFFICE DIRECTOR	

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 193 (UNIVERSITY BOULEVARD) AT  
I-495 (CAPITAL BELTWAY)

**TRAFFIC SIGNALIZATION PLAN**

SCALE 1"=20' DATE 09/2006 CONTRACT NO. M06235187

DESIGNED BY SBS COUNTY MONTGOMERY  
DRAWN BY SBS LOGMILE 15019304.84  
CHECKED BY BAB T.I.M.S. NO. H314  
F.A.P. NO. SEE TITLE SHEET TOD NO.

DRAWING NO. TS-4521 OF SHEET NO. 33 OF 36